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ABSTRACT

This study investigated the effects of prefatory statements (advance organizers) on the listening comprehension of 310 Cliffside Park, New Jersey, fourth and fifth graders. Six null hypotheses were tested: two examining the differences in listening comprehension between students of both grade levels who used and did not use prefatory statements; two testing the effect of prefatory statements on subjects with above average, average, and below average reading comprehension levels; and two examining the relationship between subjects' sex and the use and nonuse of prefatory statements. Listening comprehension was measured by using four exercises developed by the experimenter. Data revealed no significant difference in listening comprehension between students using prefatory statements and those not using prefatory statements, with regard to grade level, reading comprehension level, or sex of subject. (Author/KS)

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THE EFFECT OF PREFATORY STATEMENTS ON THE LISTENING COMPREHENSION OF FOURTH AND FIFTH GRADERS

AN ABSTRACT OF A THESIS
SUBMITTED TO THE FACULTY
OF THE GRADUATE SCHOOL OF EDUCATION
OF
RUTGERS
THE STATE UNIVERSITY OF NEW JERSEY
BY

ELAINE KEEGAN LUDERER

IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE
OF
MASTER OF EDUCATION

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COMMITTEE CHAIRPERSON: JAMES SWALM, ED.D.

NEW BRUNSWICK, NEW JERSEY JUNE, 1976

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ABSTRACT

The purpose of this study was to determine the effects of prefatory statements (advance organizers) on the listening comprehension of fourth and fifth graders. It was anticipated that the results of the present study could be of use to teachers in a regular classroom situation.

The study was conducted in Cliffside Park, New Jersey and involved 310 students in the fourth and fifth grades.

Six null hypotheses were tested. The first two examined the difference between students using prefatory statements and students not using prefatory statements for both grade levels. The second two hypotheses tested the effect of reading levels of above average, average, and below average with and without prefatory statements for both grade levels. And the last two hypotheses examined sex differences and the use and nonuse of prefatory statements for both grade levels.

Listening comprehension was measured using four listening exercises developed by the experimenter and tested in a Pilot Study. There were two listening exercises for each grade level. The two exercises enabled the subjects to receive both treatments, prefatory statement with one story and the other story without the prefatory statement.

The Reading Comprehension Test of the Iowa Tests of

Basic Skills served as the reading measure.

All children were screened for auditory problems.

Seven intact classes on fourth and seven intact classes on fifth-grade level were randomly assigned to a group that would hear the prefatory statement with the first or second story.

The subjects were then rank ordered and one-half of the initial testing population was randomly selected for the final analysis of data. The subjects were then divided into above-average, average, and below-average reading levels on the basis of the reading comprehension score.

The data was analyzed using a One- and Two-Way Analysis of Variance. The .05 level was established as the acceptable level of significance for the investigation.

The results of the first two hypotheses showed no significant difference in listening comprehension between students using prefatory statements and students not using prefatory statements in three of four stories.

The results of the third and fourth hypotheses showed no difference in listening comprehension between above-average, average, and below-average readers using prefatory statements and above-average, average, and below-average readers not using prefatory statements in 11 of 12 reading levels.

The results of the last two hypotheses showed no

difference in listening comprehension between boys and girls using prefatory statements and boys and girls not using prefatory statements for both grade levels.

It was concluded that prefatory statements had a limited effect on the listening comprehension of fourth and fifth graders. It was also concluded that prefatory statements do not enhance the listening comprehension of any particular reading level. It was further concluded that sex is not a factor to consider in listening comprehension.

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CHAPTER I

INTRODUCTION

A great deal of research has been conducted by David Paul Ausubel concerning the theory of meaningful reception learning. The theory has been directed toward explicating the process whereby adolescents and adults acquire and maintain subject matter knowledge.

Cognitive structure has been postulated to be hierarchically organized in terms of highly inclusive conceptual traces under which are subsumed less inclusive ideas. New meanings are presumably acquired through a process of assimilation whereby unfamiliar information is incorporated into the broader knowledge system. Thus, if existing cognitive structure is clear, stable, and organized, new learning should be facilitated. Conversely, if existing cognitive structure is unclear and disorganized, new learning should be impeded.

Attempts to operationalize this aspect of the theory have involved preceding a learning task (most often a written passage) with a device termed an advance organizer. Typically, advance organizers have taken the form of a prose passage which deals with the content of the learning passage at a higher level of generality and inclusiveness.

Advance organizers are purported to facilitate learning in at least two ways. First, they provide a conceptual framework for learning new material. Second, they assist the learner in discriminating between new material and similar or conflicting ideas in his existing cognitive structure (Ausubel, 1968). Ausubel (1960, 1961, 1962) found advance organizers improved reading comprehension, and Brown (1959) found they improved listening comprehension with college students.

The prefatory statements that were used in this study were a form of advance organizers. The purpose of the prefatory statements was to provide a conceptual framework, a scaffolding, by which the child would be prepared for the listening exercise.

The present study was initiated to determine what implications, if any, Ausubel's and Brown's findings have on young children in grades four and five.

Statement of the Problem

The purpose of this study was to determine if the use of prefatory statements can improve listening comprehension in the fourth and fifth grades.

The following hypotheses were tested.

Hypothesis 1

There will be no difference in listening comprehension between students using prefatory statements and students not using prefatory statements in the fourth grade.

Hypothesis 2

There will be no difference in listening comprehension between students using prefatory statements and students not using prefatory statements in the fifth grade.

Hypothesis 3

There will be no difference in listening comprehension for above-average, average, and below-average readers using prefatory statements and above-average, average, and below-average readers not using prefatory statements in the fourth grade.

Hypothesis 4

There will be no difference in listening comprehension between above-average, average, and below-average readers using prefatory statements and above-average, average, and below-average readers not using prefatory statements in the fifth grade.

Hypothesis 5

There will be no difference in listening comprehension between boys and girls using prefatory statements and boys and girls not using prefatory statements in the fourth grade.

Hypothesis 6

There will be no difference in listening comprehension between boys and girls using prefatory statements and boys and girls not using prefatory statements in the fifth grade.

Importance of the Study

A great deal of research has been done in the field of listening in the past 10 years. Experimenters have examined the importance of listening, its relationship to reading, and the development of listening programs. There is little research available on the effects of structuring the listening situation by the use of introductory statements or any similar method. The work that has been done is either in need of being updated or has been conducted with older students.

The investigator was unable to find any study that examined the effectiveness of prefatory statements on the listening comprehension of younger students. The present study provided data on the effectiveness of a prefatory statement on the listening comprehension of fourth and fifth-grade students.

The second importance of this investigation was the examination of the effects of prefatory statements on above-average, average, and below-average readers for the two different treatments. The investigation determined which reading levels, if any, performed significantly

better in listening comprehension while using the prefatory statements.

The third importance of this study was that if prefatory statements can be shown to improve listening comprehension, then the use of such a structuring technique can be beneficially used to improve listening comprehension in a wide range of curriculum areas. For example, classroom lectures and lessons could be preceded with an introductory statement to prepare the student for the material. Taped material such as films and filmstrips could easily be preceded with a prefatory statement.

Definition of Terms

Prefatory Statement

For the purpose of this study, a prefatory statement consisted of a 50-70 word introduction to the listening exercise. The prefatory statements have been presented in Appendix A.

Listening

Listening may be defined as the act of giving attention to the spoken word, not in just hearing symbols but in reacting to them with understanding (Abrahms, 1966).

Listening Comprehension

Listening comprehension in the present study referred to the number of correct items on a listening exercise. Each listening exercise consisted of 14 multiple-

choice questions.

Reading Comprehension

Reading comprehension in the present study referred to the raw score on the reading comprehension test of the Iowa Tests of Basic Skills.

Reading Level

For the purpose of this investigation, the terms above average, average, and below average were used to designate reading level. Students were divided into one of three groups on the basis of their scores on the reading comprehension test of the Iowa Tests of Basic Skills. The above-average group consisted of the top 27% of students; the average group consisted of the middle 46%; and the below-average group consisted of the bottom 27% of students. This procedure was followed for both grades four and five.

Limitations

The ability to generalize from the findings of this study will be limited in the following ways:

1. The study was conducted in Cliffside Park, New Jersey. The town is basically a white middle-class Bergen County community. The ability to generalize from this study is limited to how closely other areas match the socioeconomic population studied.

2. The experimenter did not determine how much

emphasis the classroom teacher placed on listening skills or how many structured listening experiences the children had. The importance placed on listening by classroom teachers could have affected the listening habits of the children.

3. The listening literature did not provide a standardized listening test for the middle elementary grades. Listening comprehension, therefore, was measured by four tests that were developed by the experimenter. For this investigation, the assumption was made that listening ability would be measured by the listening exercises. The results of this study are valid to the extent that the listening exercises actually measured listening comprehension.

4. The prefatory statements were written by the experimenter. The data reflected the effects of a particular prefatory statement on the listening comprehension of the children. Selection of other prefatory statements might possibly yield different results.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this chapter will be to review the literature that is relevant to the present study.

In reviewing the literature, the following topics will be discussed:

1. Ausubel's theory of meaningful verbal learning
2. The Ausubel and Fitzgerald studies
3. Additional organizer and reading studies
4. The relationship between reading and listening
5. Organizers and listening

In his recent book, Understanding Reading, Frank Smith stated that what the brain tells the eye is accountable for much more of comprehension than what the eye tells the brain. That is, it is not so much the nature of what is to be read (what is seen by the eye), as it is the nature of the reader (the information processing activity of which he is capable) which determines comprehension. One implication of this suggests the possibility the comprehension may be more effective through modification of the reader in preparation for reading than through modification of the reading material.

Similar thinking must have led Ausubel to formulate

a theory of comprehension which he operationalized as an advance organizer (Estes, 1972).

Ausubel's Theory of Meaningful Verbal Learning

Ausubel's theory of meaningful receptive learning postulated the existence of a cognitive structure that is hierarchically organized in terms of highly conceptual traces under which are subsumed less inclusive concepts. Ausubel further asserted that existing cognitive structure was the primary factor affecting meaningful verbal learning and retention.

In the theory of meaningful verbal learning, a main concept is that new material which is to be learned must be related to the learner's existing cognitive structure. In other words, new subject matter is acquired as unfamiliar knowledge and is then integrated or subsumed into the learner's hierarchical cognitive structure. Subsumption, then, is the process of incorporating new subject matter into a larger, comprehensive knowledge system.

Ausubel further stated that if a learner is to acquire new concepts from verbal material, he must have an existing cognitive structure upon which new concepts can be subsumed or anchored. If specific cognitive elements are not available for anchorage of specific new input, subsequent achievement is affected.

In order to facilitate the process of acquisition

and retention of meaningful material, Ausubel advocated the use of advance organizers. Advance organizers provided an introductory overview at the appropriate level of conceptualization.

In summary, then, the advance organizer was a set of materials designed specifically to facilitate the incorporation of a given body of knowledge into the cognitive structure of the learner. Ausubel wrote that the advance organizer must be written on a higher level of abstraction, inclusiveness, and generality than that of the new material to be presented. Once the advance organizer has been established in the learner's cognitive structure, the new ideas can be subsumed under its more inclusive, abstract, and general propositions (Ausubel, 1968).

The Ausubel and Fitzgerald Studies

The first three studies conducted by Ausubel (Ausubel, 1960; Ausubel & Fitzgerald, 1961, 1962) showed the positive effects of the use of the organizer. The three studies supported the hypotheses of Ausubel.

Ausubel (1960) first postulated the basic rationale for the phenomena involving conceptual organization. He hypothesized that both learning and retention could be aided by providing the reader with key points of an unfamiliar but meaningful passage prior to its presentation (advance organization). He tried to bring about this conceptual structuring by using two different types of 500-

word introductory passages, a historical introduction, and an advance organizer.

A comparison of mean retention scores showed that the advance-organizer group performed significantly better than the historical-introduction group at the .05 level of confidence (Ausubel, 1960).

Next, Ausubel and Fitzgerald studied advance organization with the use of three different types of organizers, comparative, expository, and historical.

Ausubel found that the comparative and expository organizers seemed to work most effectively only with subjects whose conceptual background in the area of concern was relatively weak (Proger, 1970).

In the third relevant study, Ausubel and Fitzgerald studied organization in light of sequential learning with the use of two types of organizers. One organizer was directly related to the reading selection and the other was not.

Ausubel found that the directly related organizer was significantly different than the other organizer at the .07 level of confidence. However, Ausubel and Fitzgerald found that nearly all of this significant difference was caused by subjects in the bottom third in verbal ability. The investigators reasoned that advance organizers were effective mainly with poor verbal ability subjects because they initially possessed poor conceptual

organization, while high verbal ability subjects had the power to organize new concepts spontaneously (Proger, 1970).

Blanton (1972), however, found many difficulties with the Ausubel studies. Blanton wrote that generalizing from the results of the experiments was difficult for three reasons. First, test reliabilities were not reported. Second, it was difficult to determine whether the test measured substantive or verbatim learning. Finally, exactly how the advance organizer was generated was not clear.

Estes (1972) also emphasized the problems involved with generating an advance organizer. Estes wrote that several difficulties with the advance organizer have become apparent. As an aid to comprehension, it is almost impossible to use. The teacher or researcher is never quite sure whether the introductory passage is at a truly higher level of generality and inclusiveness in comparison to the learning passage. Furthermore, one can never conveniently know the nature of the concept the organizer is supposed to mobilize in the mind of the reader, or indeed, whether the concepts even exist for the individual. In fact, organizers seem definable only on an ex-post-facto basis. If it worked, it was an advance organizer for the reader. If it did not, it was not. It seems that if the learner's cognitive structure is complete in terms of the necessary

relevant concepts, there will simply be nothing for the organizer to organize. On the other hand, if the learner's understanding of these concepts is already very clear, the organizer will act as mere noise, either having no effect or actually inhibiting learning which might otherwise have been successful.

Additional Organizer and Reading Studies

In spite of the problems involved with the generating of advance organizers, many researchers have designed studies to examine the effectiveness of advance organization.

Researchers such as Grotelueschen (1968), Scandura (1967), and Smith and Hesse (1969) found organizers to be effective with a variety of populations and in a variety of subject areas.

In the first study, Grotelueschen (1968) examined a study by Ausubel and Fitzgerald (1962) that found introductory material to be facilitative for persons of low verbal ability and wondered if introductory material would be effective with adults of superior intelligence. The results of the experiment supported the hypothesis that introductory material can facilitate the learning and transfer of a number base concept with adults of superior intelligence.

In a second study (Scandura, 1967), historical and

model introductions to formally describe abstract mathematical content were compared for their effects on learning efficiency. It was hypothesized that learning would be enhanced more by the model introduction which would in effect serve as an advance organizer. The results showed that the groups that used the model introduction (organizer) were statistically superior to groups using the historical introduction at the .05 level.

A study by Smith and Hesse supported findings in a study by Ausubel in which Ausubel found organizers to facilitate comprehension of below-average readers.

Smith and Hesse (1969) found organizers to facilitate comprehension for poor readers in the 11th grade. Smith and Hesse wrote that poor readers may not have the styles of cognitive organization sufficiently well developed to aid their comprehension. Therefore, their comprehension of a reading selection may be improved by having an organizer provided for them.

On the other hand, good readers have reasonably well developed styles of organizing themselves cognitively to comprehend what they read. When a cognitive organization different from their own is produced for them, it may tend to interfere with their individual styles and produce poorer comprehension.

Studies conducted by Estes (1972), Barron (1972), and Jerrolds (1972), while not reaching statistical

significance, showed a trend favoring subjects using advance organizers.

The Relationship Between Reading and Listening

There were many studies that dealt with the relationship between reading and listening. Research dealing with correlations between scores in reading and listening were examined.

Duker (1968) wrote that the nature and extent of the relationship has been explored on both theoretical and research levels for at least two decades and that both kinds of behavior are related in that (a) both are concerned with the intake half of the communication process, (b) each seems to be a complex process related to skill components, (c) the same higher mental process seems to underlie both, and (d) positive correlations exist between test scores in reading and listening.

Research substantiating the last of these relationships (i.e., positive correlations exist between test scores in reading and listening), have been conducted by Biggins (1961), Hollingsworth (1968), Pratt (1956), Trivette (1961), and Winter (1966).

Duker (1965) wrote that 23 major studies have reported a coefficient of correlation between reading and listening. Coefficients of correlation ranged between .45 and .70. The wide range of findings was probably a result

of the differing populations employed as subjects and the variety of tests used to measure listening and reading skills. However, these studies showed a strong positive relationship between listening and reading.

Carver (Kussat, 1974) pointed out some of the differences between the experience of listening and that of reading.

In the reading situation, printed words, although spatially separated, are experienced more as related items in larger groupings than as isolated units. Every reader, unless he is a beginner or unless a passage is unusually difficult, makes word groupings of some kind; although, to be sure, the number of words included within a single perceptual grouping will vary with his attitude, with his familiarity with the material, and with his general reading habits. While reading, one is able to fit a word into the immediate context of words which follow it as well as those which have just preceded it--a fact of particular importance in the comprehension of difficult material. In short, the reader to a large extent determines the range and tempo of his own perceptual experience. Varying his speed, grouping words and phrases, and studying context, he extracts from the visual stimulus-situation as much meaning as he possibly can. In the listening situation, on the other hand, words are separated in time and must necessarily be experienced as isolated units. Word groupings are

made by the speaker. The listener does not make his own groupings; they are made for him.

In addition, the listener has an opportunity to fit a word or group of words into the context only as so far as he is able to remember the previous words. In ordinary discourse, this process presents no difficulties; but it becomes difficult when the words lose their familiarity (Kussat, 1974).

Organizers and Listening

It seems evident from classroom observation that children are only obtaining a minimum amount of information through listening. How can children make better use of their listening ability? This question might be answered by the use of organizers.

Structuring the listening situation has a place in listening research. Many researchers would agree that listening involves a focusing of attention and anticipation of what is to come.

In such research, Ralph Nichols (1956), believed that sustained attention to oral discourse depended upon the listener's mental manipulation of its content. Or, in other words, the use of an internal organizer on the part of the listener.

Nichols stated that whereas the typical lecture is given at about 100 words per minute, most students normally think at a pace four to five times that fast. This rate

differential tends to encourage embarkations upon mental tangents in spite of the fact that listening demands staying "on track" with the speaker.

Sustained attention seems completely dependent upon the listener's mental manipulation of items composing the content of the speech. To achieve this mental manipulation, one needs four techniques: (a) mental anticipation of each of the speaker's points, (b) identification of the material used to support each point, (c) mental recapitulation of points already developed, and (d) an occasional search for implied meanings.

Stanford E. Taylor (1964) indirectly talked about organizers when he discussed factors which influence listening. He wrote that among the factors to be considered were attention and concentration. Attention may be thought of as sustaining of attention. Some researchers have gone so far as to suggest that listening is little more than bringing attention to bear on an auditory stimulus.

Paul Witty (1959) realized the importance of preparing (organizing) material for children before a listening experience. He stated that preparation for listening to different types of presentations is essential, and that the most advantageous background or "set" should be devised. At times, the pupil should be led to listen with a questioning attitude similar to that which characterizes a

news reporter.

Experimental studies dealing with structuring techniques were conducted by Brown (1959) and Nichols (1948). Both studies involved college students. No studies were found that related to the use of listening organizers with elementary school children.

Ralph Nichols (1948) had 200 college freshmen listen to six 10-minute informative speeches. Upon conclusion of the speeches and objective tests, the students rated factors possibly influencing listening comprehension.

Nichols concluded that there was evidence to indicate that the following factors influenced the listening comprehension of the students: (a) reading comprehension, (b) the ability to structurize a speech (that is, to see the organizational plan and the connection of the main points), (c) the use of special techniques while listening to improve concentration, and (d) curiosity about the subject matter.

A study by Brown (1959) closely resembled the present study in many ways. Brown studied the effects of an introductory statement on the listening comprehension of college students.

Brown gave experimental groups of college students the Princeton Listening Test (STEP) along with a brief prefatory remark which preceded each section of the test and which aimed to produce an "expectation" regarding what

was to come.

In the testing situation, the experimenter played the recording and personally read both the prefatory comments and the test questions. Since he wanted to test the impact of the goal-setting comments, he felt that reading them in person gave them a special significance that they might not have if they were a product of the recorded material.

Comparing test results of the experimental students and the control students (who received the material without the prefatory remarks), Brown found a difference in favor of the former significant at the .05 level of statistical confidence.

Summary

David Paul Ausubel conducted many studies to support the hypotheses of his theory of Meaningful Verbal Learning. Ausubel's theory made use of advance organizers which he believed to facilitate the incorporation of a given body of knowledge into the cognitive structure of the learner.

Ausubel and Fitzgerald conducted many studies to support the theory of Meaningful Verbal Learning.

In the first study, Ausubel (1960) showed the effectiveness (at the .05 level) between an advance organizer and a historical introduction.

In the second study, Ausubel and Fitzgerald (1961) found advance organizers, based on conceptual

discriminability, to be most effective with subjects whose conceptual background was relatively weak.

In the third study, Ausubel and Fitzgerald (1962) found that nearly all of the significant differences were caused by subjects in the bottom third of verbal ability.

The Ausubel studies have been criticized by Blanton (1972) and Estes (1972).

Estes (1972) wrote that organizers are almost impossible to use because it is difficult to determine if an introductory passage is at a truly higher level of generality and inclusiveness in comparison to the learning passage. He also stated that organizers can only be defined on an ex-post-facto basis. If it worked for the reader, it was an advance organizer. If it did not, it was not.

In spite of the negative feedback by many researchers and the difficulties involved in generating advance organizers, many recent studies have dealt with advance organization.

Grotelueschen (1968) demonstrated the effectiveness of advance organization in a number base concept with adults of superior intelligence.

Scandura (1967) found organizers to be superior to historical introductions with college students.

Smith and Hesse (1969) found organizers to facilitate comprehension for poor 11th-grade readers.

Studies conducted by Barron (1972), Estes (1972),

and Jerrolds (1972), while not reaching statistical significance, showed a trend favoring subjects using advance organizers.

Correlation studies have shown a relationship between reading and listening. The coefficients of correlation reported ranged from .45 to .70 (Duker, 1965).

There were many studies dealing with the effectiveness of organizers and reading comprehension but a lack of emphasis on organizers and listening comprehension.

Brown (1959) conducted a study using prefatory statements with college freshmen and found the experimental group, using prefatory statements, comprehended more than did a control group which did not receive the remarks.

Most of the research concerning the structuring of listening materials was either not current (1948 and 1959) or that it was involved with older students. There was a need for research information concerning the effects of opening remarks, statements, on the listening comprehension of elementary school students. The present study was designed to provide information in an area in need of recent research findings.

CHAPTER III

PROCEDURES

The purpose of this chapter will be to: (1) describe the subjects, (2) explain the construction of the materials, (3) describe the Pilot Study, (4) describe the administration of the tests, and (5) indicate the method of analyses.

Population

The study took place in Cliffside Park, New Jersey, a semi-urban area with a population of 18,891. It is located in the southeastern corner of Bergen County. Cliffside Park is a basically homogeneous white middle-class community with an effective buying income of $9,901 per family (Bergen County Advisory Commission, 1971).

A total of approximately 310 students participated in the initial testing. Seven intact classes on fourth-grade level and seven intact classes on the fifth-grade level were involved in the study.

There were two stories for each grade level. Two stories were chosen for each grade level because it would enable each child to receive both treatments, prefatory statement and without prefatory statement. Each class heard one story with a prefatory statement and the other

story without the prefatory statement.

Classes were randomly assigned on the basis of the table of random numbers in Conducting Educational Research (Tuckman, 1972) to a group that would hear the prefatory statement with the first or with the second story.

After listening exercises were administered to all children, subjects with auditory problems of more than a 20 decibel loss in either ear were dropped from the study.

To overcome the problem of administering the listening exercises to children in intact classes and to avoid data reflective of intact classes, a further randomization procedure was necessary. All of the children in the fourth grade who took the "Mississippi Steamboat" story with the prefatory statement and the "Invention of the Balloon" without the prefatory statement were rank ordered. All of the children who took the "Mississippi Steamboat" without the prefatory statement and the "Invention of the Balloon" with the prefatory statement were rank ordered.

In the fifth grade, all of the children who took the "Story of Caves" with the prefatory statement and the "Leopard-Skin Rug" without the prefatory statement were rank ordered. Then, the children who took the "Story of Caves" without the prefatory statement and the "Leopard-Skin Rug" with the prefatory statement were rank ordered. A table of random numbers (Tuckman, 1972) was used to select subjects as follows:

1. "Mississippi Steamboat"
   26 subjects with the prefatory statement
   "Mississippi Steamboat"
   26 subjects without the prefatory statement
2. "Invention of the Balloon"
   26 subjects with the prefatory statement
   "Invention of the Balloon"
   26 subjects without the prefatory statement
3. "Story of Caves"
   30 subjects with the prefatory statement
   "Story of Caves"
   30 subjects without the prefatory statement
4. "Case of the Leopard-Skin Rug"
   30 subjects with the prefatory statement
   "Case of the Leopard-Skin Rug"
   30 subjects without the prefatory statement

The subjects selected on each grade level were then assigned a designation of above average, average, or below average on the basis of the raw score on the Reading Comprehension test of the Iowa Test of Basic Skills. The top 27% of the students were placed into the above-average classification; the middle 46% were assigned to the average group; and the bottom 27% were classified as below average.

Materials

Listening Stories

The experimenter examined the Teachers' Handbooks of the SRA Reading Laboratories 1c and 11b. The books contained stories of approximately 600-900 words in length which were written for listening improvement for elementary school students. The experimenter examined a number of stories and tested them according to the Fry Readability Formula (1968, 1969). The experimenter found two stories with fourth-grade readability ("Mississippi Steamboat" and "Invention of the Balloon") and two stories with fifth-grade readability ("The Story of Caves" and "The Case of the Leopard-Skin Rug"). The four stories have been included in Appendix C.

Listenability of the Stories

While extensive research literature exists examining readability formulas in regard to written materials, little research has been reported on listenability. Flesch (1951) felt that it did not matter whether the material was written or spoken. Lorge (1944) also stated that his formula can be applied to either written or spoken material (Kussat, 1974).

Fang (1966) devised the Easy Listening Formula (ELF) on his analysis of television news writing styles. The ELF simply counts each syllable above one per word in a sentence. The ELF attempts to measure only general clarity,

and no consideration to writings other than news scripts was given (Kussat, 1974).

The stories used in the present study were analyzed according to the ELF and obtained the following scores: (a) "The Mississippi Steamboat" 3.6, (b) "The Invention of the Balloon" 4.5, (c) "The Story of Caves" 4.7, and (d) "The Case of the Leopard-Skin Rug" 5.6.

Formulation of Test Questions

The experimenter referred again to the SRA Reading Laboratories for procedures for writing test questions. The SRA Reading Laboratories contained multiple choice questions for each of the stories selected by the investigator. Some stories contained only between 6 and 10 questions and some questions did not contain four response variables.

First, the experimenter wrote additional questions for each story so that each story contained 14 multiple choice questions. Then, the experimenter examined the response variables. New response variables were written so that each question included four response variables.

To summarize, the experimenter based the construction of the test questions on the samples used in the SRA Handbook. In many instances, new questions and new response variables were written by the experimenter so that each story contained 14 questions with four response variables for each question.

Questions and answers used in the present study have been included in Appendix D.

Prefatory Statements

The experimenter consulted the literature for information regarding the construction of organizers that would serve as prefatory statements. Ausubel (1968) wrote that organizers should be presented at a higher level of abstractness, generality, and inclusiveness than that of the new material to be presented.

A problem concerning the formation of organizers was stressed by Blanton (1972). Blanton wrote that no procedures for generating an advance organizer were offered in the literature. In addition to not operationally defining organizer, researchers have failed to define procedures for generating advance organizers. The rather loose procedures reported have resulted in a potpourri of advance organizers.

Despite the lack of guidelines, the experimenter wrote prefatory statements for each story. The prefatory statements were aimed at achieving the following goals:

1. The prefatory statement served as an introduction to the story.

2. The prefatory statement stressed the main idea of the story.

3. The prefatory statement did not provide answers to the comprehension questions.

4. The prefatory statement contained between 50 and 70 words.

The prefatory statements have been included in Appendix A.

Preparation of the Tapes

The four stories were read by the experimenter on to cassette tapes in a normal speaking voice and rate. Each tape selection was then transferred to other cassette tapes to facilitate simultaneous presentation in various classrooms.

The Pilot Study

Reliability of the Listening Stories

During the month of October, the experimenter began to administer the tests to small groups of third graders to establish the reliability of the four tests. The children listened to the tapes without hearing the prefatory statement and marked answers on the answer sheets.

The odd-even reliability scores from the first testing of all four stories were hand calculated by the experimenter. The experimenter referred to the correlation formula in Tuckman (1972). The results of the testing showed that an item analysis was necessary to locate questions and response variables that led to the low reliability scores.

All four sets of questions and answers were

rewritten by the examiner.

During the month of December, the tests were again administered to small groups of seven, eight, and nine of the same third graders. The experimenter calculated the odd-even reliability of all four stories by hand according to the steps in Tuckman (1972) and found the reliabilities sufficiently high to accept the tests as the listening measures.

The reliability scores and mean comprehension scores have been included in Table 1.

TABLE 1

RESULTS OF THE PILOT STUDY TO DETERMINE RELIABILITY AND MEAN COMPREHENSION SCORE OF TESTING INSTRUMENTS FOR GRADES 4 AND 5

Grade	Story	N	Reliability	Mean Score
4	Mississippi Steamboat	7	.97	9.42
4	Invention of the Balloon	9	.71	9.55
5	Story of Caves	8	.95	9.50
5	Leopard-Skin Rug	8	.98	7.62

Table 1 showed that the reliability scores of three stories (.97, .95, and .98) were relatively the same. The "Invention of the Balloon" was slightly lower at .71. The mean comprehension scores of the three stories were

relatively the same (9.42, 9.55, and 9.50). The mean score of 7.62 for the "Leopard-Skin Rug" showed that the story was found to be more difficult than the other three stories for this group of third graders.

Administration of Tests-- The Major Study

The experimenter met individually with the 14 teachers involved in the present study and explained the purpose of the study and the procedure for the administration of the listening tests. Special attention was paid to the procedure for the reading of the prefatory statements.

Three tests were administered to the subjects in the present study. Children received (a) auditory screening, (b) reading comprehension test, and (c) listening tests.

Auditory Screening

All children were screened for auditory problems. Children in all 14 classes were tested by one of two school nurses during the months of October and November of 1974. The experimenter examined auditory information and found four students in the fourth grade and three students in the fifth grade with an auditory loss of more than 20 decibels in one ear. The seven students were dropped from the study after they heard the listening stories with their respective classes.

Reading Comprehension Test

The reading comprehension test of the Iowa Tests of Basic Skills served as the reading measure and was administered to grades four and five during the month of September, 1974. The Iowa Tests were part of the regular testing schedule of the Cliffside Park public schools. The test was administered by classroom teachers in intact classes.

Listening Tests

The listening tests consisted of two stories for each grade level. Seven intact classes on each grade level were randomly assigned to groups in which the prefatory statement was given for the first story or with the second story.

The design for the administration of the listening tests has been indicated in Table 2.

The tests were administered by classroom teachers on January 14, 1975 and January 16, 1975. On Tuesday morning, all fourth grades heard the story "Mississippi Steamboat." Three classes heard the story with the prefatory statement and four classes heard the story without the prefatory statement. On the fifth-grade level, for the same date, all classes heard the "Story of Caves." Three classes heard the story with the prefatory statement and four classes heard the story without the prefatory statement.

TABLE 2

PROCEDURE FOR THE ADMINISTRATION OF THE LISTENING STORIES WITH AND WITHOUT PREFATORY STATEMENTS FOR GRADES 4 AND 5

Grade	Story	Class	Prefatory Statement
	January 14, 1975		
4	Mississippi Steamboat	1	Without
		2	Without
		3	Without
		4	With
		5	Without
		6	With
		7	With
	January 16, 1975		
4	Invention of the Balloon	1	With
		2	With
		3	With
		4	Without
		5	With
		6	Without
		7	Without
	January 14, 1975		
5	Story of Caves	1	Without
		2	With
		3	Without
		4	Without

TABLE 2--Continued

Grade	Story	Class	Prefatory Statement
5	Story of Caves	5	With
		6	With
		7	Without
	January 16, 1975		
5	Leopard-Skin Rug	1	With
		2	Without
		3	With
		4	With
		5	Without
		6	Without
		7	With

On January 16, 1975, all fourth-grade classes took the test for the "Invention of the Balloon." Four classes heard the story with the prefatory statement and three classes heard the story without the prefatory statement. On the fifth-grade level, for the same date, all classes heard the "Case of the Leopard-Skin Rug." Four classes heard the story with the prefatory statement and three classes heard the story without the prefatory statement.

The following procedure was used for classes hearing the prefatory statement with the story:

1. The teacher instructed all children to clear

their desks.

2. The teacher drew the attention of the class and said, "You are going to hear a story from the tape recorder. Listen carefully to the story so that you can answer the questions that will follow."

3. The teacher read the prefatory statement to the class.

4. The teacher played the tape of the story.

The following procedure was used for classes who would hear the story without the prefatory statement:

1. The teacher instructed all children to clear their desks.

2. The teacher drew the attention of the class and said, "You are going to hear a story from the tape recorder. Listen carefully to the story so that you can answer the questions that will follow."

3. The teacher played the tape of the story.

The treatments which included prefatory statement and without prefatory statement were identical for steps 1 and 2. The inclusion of step 3 under prefatory statement differentiated the two treatments. Step 4 under prefatory statement and step 3 under without prefatory statement were identical.

Exact procedures used by classroom teachers for each of the four stories have been included in Appendix B.

After the tape of the story was played, the teacher

referred to a procedure sheet for the comprehension questions. The teachers, at this point, distributed the answer sheets to the children. The children's answer sheets contained 14 sets of answers. The teacher read the question and four possible answers from the procedure sheet, and the child marked the correct response. The child's paper did not contain the question, only the four possible answers. The child listened for the question and the answers, followed each answer as it was read, then marked one answer for each of the 14 questions. The teacher collected the papers which were scored by the experimenter.

The same procedure was repeated at the next testing date.

Copies of procedure sheets for questions for the four stories have been included in Appendix E.

Statistical Design

All of the pertinent data concerning the subjects and their scores were transferred to IBM cards by the experimenter. The data was processed at the Center for Computer and Information Services, Rutgers--The State University of New Jersey. The Cook Statistics Program, One and Two Way Analysis of Variance with Unequal Cell Sizes (revised June, 1971) was used to analyze the data.

The data for the following were analyzed for each of the four stories: (a) prefatory statement and without prefatory statement treatments, (b) reading level (above

average, average, and below average) and listening, and (c) boy and girl differences for prefatory statement and without prefatory statement treatments.

The first and second sets of data were analyzed at the same time using a Two-Way Analysis of Variance. The first analysis examined the difference between students using the prefatory statement treatment and the students not using the prefatory statement treatment. The second analysis examined the difference between the three reading levels of above average, average, and below average.

The third set of data was also analyzed using a Two-Way Analysis of Variance. The analysis was used to evaluate the difference between boys and girls using prefatory statements and boys and girls not using prefatory statements for all four stories.

The .05 level of statistical significance was established as the acceptable level of significance for the investigation.

Correlations were calculated using the SPSS Program for Correlation. Correlation coefficients were calculated for reading and listening scores for all four stories.

The means and standard deviations obtained from the analysis of variance were used to construct tables to show differences between groups using prefatory statements and groups not using prefatory statements, effects on reading level, and sex differences.

F values were compared for significance using a standard table.

CHAPTER IV

RESULTS AND DISCUSSION

The purpose of this chapter will be to present the data derived from the present study. The information will be presented in the stated order of the hypotheses of the study. Then the results will be related to the pertinent literature. There were few studies, however, that examined the effects of organizational techniques upon listening comprehension. Hence, the discussion will examine the results of the present investigation from the studies available.

Hypothesis 1

There will be no difference in listening comprehension between students using prefatory statements and students not using prefatory statements in the fourth grade.

A significant difference was not found between students using prefatory statements and students not using prefatory statements for both fourth-grade stories. The data did not provide sufficient grounds to reject the null hypothesis.

The mean scores for the fourth-grade stories have been presented in Table 3.

TABLE 3

SUMMARY OF MEANS AND STANDARD DEVIATIONS FOR PREFATORY STATEMENT AND WITHOUT PREFATORY STATEMENT TREATMENTS IN THE FOURTH GRADE

Treatment	N	Mean	SD	F Score
Mississippi Steamboat				
Prefatory Statement	26	8.3	2.3	
Without Prefatory Statement	26	7.7	2.0	1.13
Invention of the Balloon				
Prefatory Statement	26	10.5	2.5	
Without Prefatory Statement	26	9.5	2.4	1.97

Note. Neither F score significant at the .05 level.

For the "Mississippi Steamboat," the mean score of the students using prefatory statements (8.3) was slightly higher than the mean score for students not using prefatory statements (7.7). However, the difference between the scores was not found to be significant.

For the "Invention of the Balloon," the mean score of the students using prefatory statements (10.5) was slightly higher than the mean score for students not using prefatory statements (9.5). Again, the difference between the scores was not found to be significant.

Hypothesis 2

There will be no difference in listening comprehension between students using prefatory statements and students not using prefatory statements in the fifth grade.

The two fifth-grade stories showed drastically different results.

For the "Story of Caves," a significant difference was not found between students using prefatory statements and students not using prefatory statements. Mean scores for prefatory statement and without prefatory statement treatments have been presented in Table 4.

TABLE 4

SUMMARY OF MEANS AND STANDARD DEVIATIONS FOR PREFATORY STATEMENT AND WITHOUT PREFATORY STATEMENT TREATMENTS IN THE FIFTH GRADE

Treatment	N	Mean	SD	F Score
The Story of Caves				
Prefatory Statement	30	11.0	2.7	
Without Prefatory Statement	30	11.0	2.1	.00
Case of the Leopard-Skin Rug				
Prefatory Statement	30	9.3	2.8	
Without Prefatory Statement	30	6.4	3.1	15.04[a]

[a]Significant at .05 level.

An examination of the mean scores shows identical scores of 11.0 for both treatment groups. It appears that

the prefatory statement did not facilitate listening comprehension for the "Story of Caves."

For the "Case of the Leopard-Skin Rug," a significant difference was found between students using prefatory statements and students not using prefatory statements.

An examination of the mean scores for prefatory statement and without prefatory statement, presented in Table 4, shows a wide divergence between the two mean scores of 9.3 (prefatory statement) and 6.4 (without prefatory statement).

The prefatory statement for the "Case of the Leopard-Skin Rug" was found to significantly improve listening comprehension.

The second hypothesis could only be rejected in part because of the differing results obtained by the two fifth-grade stories.

Hypothesis 3

There will be no difference in listening comprehension between above-average, average, and below-average readers using prefatory statements and above-average, average, and below-average readers not using prefatory statements in the fourth grade.

The third null hypothesis was not rejected because a significant difference was not found between groups using prefatory statements and groups not using prefatory statements for either fourth-grade story.

The means and standard deviations for the three reading levels, for the "Mississippi Steamboat," have been presented in Table 5.

TABLE 5

SUMMARY OF THE MEANS AND THE STANDARD DEVIATIONS OF THE ABOVE-AVERAGE, AVERAGE, AND BELOW-AVERAGE READING LEVELS USING PREFATORY STATEMENT AND WITHOUT USING PREFATORY STATEMENT TREATMENTS IN THE FOURTH GRADE

	Prefatory Statement			Without Prefatory Statement		
	N	Mean	SD	N	Mean	SD
			Mississippi Steamboat			
AA	7	10.1	2.0	7	8.6	1.9
A	12	7.7	1.9	12	7.5	1.9
BA	7	7.6	2.9	7	7.1	2.1
			Invention of the Balloon			
AA	7	11.1	3.4	7	11.9	2.4
A	12	10.4	1.9	12	9.8	2.5
BA	7	9.8	2.4	7	6.4	2.4

The mean score of the above-average group using the prefatory statement (10.1) was higher than the mean score of the above-average group not using prefatory statement (8.6).

The mean score of the average group using the prefatory statement (7.7) was relatively the same as the average group not using the prefatory statement (7.5).

The mean score for the below-average group using the prefatory statement (7.6) was slightly higher than the mean score of the below-average group not using the prefatory statement (7.1).

For the "Mississippi Steamboat," it appears that there was a tendency for the groups using the prefatory statement to have a higher mean score than the groups not using the prefatory statement.

The means and standard deviations for the three reading levels for the "Invention of the Balloon" have also been presented in Table 5.

The mean score for the above-average group using the prefatory statement (11.1) was lower than the score of the above-average group not using the prefatory statement (11.9).

For the average group, the mean score of 10.4 for the prefatory statement was higher than a mean score of 9.8 for the group not using the prefatory statement.

The below-average group using the prefatory statement (9.8) had a higher mean score than the below-average group not using the prefatory statement (6.4).

For the "Invention of the Balloon," there was a tendency for the average and below-average groups to obtain a higher mean score while using the prefatory statement.

Hypothesis 4

There will be no difference in listening comprehension between above-average, average, and below-average readers using prefatory statements and above-average, average, and below-average readers not using prefatory statements in the fifth grade.

The means and standard deviations for the three reading levels for the "Story of Caves" have been reported in Table 6.

TABLE 6

SUMMARY OF THE MEANS AND STANDARD DEVIATIONS OF THE ABOVE-AVERAGE, AVERAGE, AND BELOW-AVERAGE READING LEVELS USING PREFATORY STATEMENT AND WITHOUT USING PREFATORY STATEMENT TREATMENTS IN THE FIFTH GRADE

	Prefatory Statement			Without Prefatory Statement			
	N	Mean	SD	N	Mean	SD	F Score[a]
The Story of Caves							
AA	8	12.4	1.1	8	12.8	1.3	
A	14	10.9	2.7	14	10.9	2.0	
BA	8	9.9	4.4	8	9.3	3.2	
The Case of the Leopard-Skin Rug							
AA	7	9.8	2.9	7	7.6	3.3	3.39
A	15	9.1	2.7	15	5.9	2.8	10.30[b]
BA	8	9.3	3.0	8	6.1	3.3	1.86

[a]One Way Analysis of Variance was used for the "Case of the Leopard-Skin Rug" to compare AA with prefatory

TABLE 6--Continued

statement with AA without prefatory statement; a with prefatory statement with A without prefatory statement; and BA with prefatory statement with BA without prefatory statement because a significant difference was found between the two treatments in Table 4.

[b]Significant at .05 level.

For the "Story of Caves," a significant difference was not found between groups using prefatory statements and groups not using prefatory statements.

An examination of the table shows that there was almost no difference between readers on all three levels using prefatory statements and not using prefatory statements.

The mean score of the above-average group using prefatory statement (12.4) was lower than the mean score of the above-average group not using the prefatory statement (12.8). The mean score for the average group for both treatments were identical at 10.9. The mean score for the below-average group using the prefatory statement (9.9) was slightly higher than the below-average group not using prefatory statement (9.3).

For the other fifth-grade story, the "Case of the Leopard-Skin Rug," a significant difference was found between the reading levels.

The means and standard deviations for the three reading levels for the "Leopard-Skin Rug" have been

presented in Table 6. An examination of the results reveal a wide disparity between the reading levels using the prefatory statement and the reading levels not using the prefatory statement.

The mean score for the above-average group using the prefatory statement (9.8) was higher than the above-average group not using the prefatory statement (7.6). The difference between the two mean scores was not found to be significant.

The mean score for the average group using the prefatory statement (9.1) was significantly higher than the mean score of the average group not using the prefatory statement (5.9).

The mean score for the below-average group using the prefatory statement (9.3) was higher than the mean score of the below-average group not using the prefatory statement (6.1). The difference, however, was not found to be significant.

The fourth hypothesis, therefore, was rejected only in part due to the significant difference that was found between the three reading levels and listening for the "Case of the Leopard-Skin Rug."

Hypothesis 5

There will be no difference in listening comprehension between boys and girls using prefatory statements and boys and girls not using prefatory statements in the fourth

grade.

The fifth hypothesis was not rejected because a significant difference was not found between boys and girls using prefatory statements and boys and girls not using prefatory statements in the fourth grade.

The mean scores for sex differences for the fourth grade have been reported in Table 7.

TABLE 7

SUMMARY OF MEANS OF BOYS AND GIRLS USING PREFATORY STATEMENTS AND BOYS AND GIRLS NOT USING PREFATORY STATEMENTS IN THE FOURTH GRADE

	Prefatory Statement		Without Prefatory Statement		
	N	Mean	N	Mean	F Score
		Mississippi Steamboat			
Boys	13	9.2	14	7.8	
Girls	13	7.5	12	7.6	1.28
		Invention of the Balloon			
Boys	13	11.2	14	9.6	
Girls	13	9.7	12	9.4	2.20

Note. Neither F score was significant at the .05 level.

For the "Mississippi Steamboat," the results show that boys using prefatory statements had a higher mean score than boys not using prefatory statements. The girls' mean score was relatively the same for both treatments.

For the "Invention of the Balloon," the boys using prefatory statements had a higher mean score than boys not using the prefatory statement. The girls' mean scores were relatively the same.

On the fourth-grade level, therefore, there was a tendency for boys to score higher with the use of a prefatory statement.

Hypothesis 6

There will be no difference in listening comprehension between boys and girls using prefatory statements and boys and girls not using prefatory statements in the fifth grade.

The sixth null hypothesis was also not rejected because a difference was not found between boys and girls using prefatory statements and boys and girls not using prefatory statements in the fifth grade.

The mean scores for sex differences for the two fifth-grade stories have been reported in Table 8.

For the "Story of Caves," the results show that the boys using prefatory statements had a higher mean score than the boys not using prefatory statements. The girls using prefatory statements, however, scored slightly lower than girls not using prefatory statements.

For the "Case of the Leopard-Skin Rug," boys and girls using prefatory statements had higher mean scores than boys and girls not using prefatory statements.

TABLE 8

SUMMARY OF MEANS OF BOYS AND GIRLS USING PREFATORY STATEMENTS AND BOYS AND GIRLS NOT USING PREFATORY STATEMENTS IN THE FIFTH GRADE

	Prefatory Statement		Without Prefatory Statement		
	N	Mean	N	Mean	F Score
		Story of Caves			
Boys	16	11.9	15	11.1	
Girls	14	10.2	15	10.9	1.60
		Case of the Leopard-Skin Rug			
Boys	15	9.4	15	6.6	
Girls	15	9.2	15	6.2	.15

Note. Neither F score was significant at the .05 level.

Correlation Coefficients Between Reading and Listening

Pearson Correlation Coefficients for all four stories have been presented in Table 9. The first three stories showed a moderate correlation between reading and listening, and the last story showed a low correlation between reading and listening. The correlation coefficients of the first three stories were significant at the .05 level.

TABLE 9

SUMMARY OF PEARSON CORRELATION COEFFICIENTS FOR READING AND LISTENING SCORES FOR FOURTH AND FIFTH GRADES

Story	Grade	N	Correlation Coefficient
Mississippi Steamboat	4	52	.31[a]
Invention of the Balloon	4	52	.48[a]
Story of Caves	5	60	.43[a]
Case of the Leopard-Skin Rug	5	60	.14

[a]Significant at .05 level.

Discussion

As previously stated, the literature related to the present study was limited. While many studies examined the effect of organizational techniques on reading, only one study by Brown (1959) investigated the effect of prefatory statements on listening comprehension. Therefore, the experimenter will be able to relate the present findings to the review of the literature in a very limited way.

The discussion will be divided into (a) prefatory statement vs. without prefatory statement, (b) reading level, and (c) sex differences. Studies mentioned in the review of the literature will be mentioned when appropriate.

Prefatory Statement vs. Without Prefatory Statement

The results of the three out of four stories disagreed with many investigators such as Ausubel (1960), Groteluеschen (1968), Scandura (1967), and Smith and Hesse (1969). The investigators found a significant difference between groups using organizational techniques and groups not using such techniques.

The present study also disagreed with Brown (1959) who found a significant difference between college-age subjects using prefatory statements and subjects not using prefatory statements.

While not achieving statistical significance, two of four stories showed trends favoring students using prefatory statements. Similar results were reported by Estes (1972) and Jerrolds (1972).

The results of the present study should also be discussed in light of the statement made by Estes (1972). Estes stated that organizers seem definable only on an ex-post-facto basis. If it worked, it was an advance organizer for the reader; if it did not, it was not.

The experimenter found only one prefatory statement, in the "Case of the Loepard-Skin Rug," which facilitated listening comprehension for the reader. In order to determine why this particular prefatory statement worked, it is necessary to examine the data collected for the "Case of the Leopard-Skin Rug."

The results of the Pilot Study presented in Table 2 showed that the "Case of the Leopard-Skin Rug" had the lowest mean score of correct answers. The story was the most difficult of the four stories for the testing population.

The results of the Easy Listening Formula showed that the "Leopard-Skin Rug" contained more syllables per word in a sentence than any of the other three stories.

An examination of Tables 3 and 4 showed again that the "Leopard-Skin Rug" was the most difficult story for the subjects.

The experimenter has been led to believe that the difficulty level of the story, although tested to be on fifth-grade readability, was probably the determining factor that resulted in a significant difference between the prefatory statement and without prefatory statement treatments.

Reading Level

The results of the present study dealing with reading level disagreed with the findings of Ausubel and Fitzgerald (1962) and Smith and Hesse (1966).

Ausubel and Fitzgerald (1962) found organizers to be effective with subjects with poor verbal ability, and Smith and Hesse (1966) found organizers to facilitate the reading comprehension of poor readers in the 11th grade.

Only one analysis of 12 showed a significant difference, average readers for the "Leopard-Skin Rug,"

between prefatory statement and without prefatory statement treatments.

Groups using prefatory statements in 9 cases out of 12 showed a tendency to score higher in listening comprehension than groups not using prefatory statements.

There were no conclusive results, however, to show that a particular reading level benefited from using prefatory statements.

Sex Differences

There is no research evidence available that showed a relationship between sex and the use or nonuse of an organizational technique.

The present study showed a trend in all four stories for boys to have a higher mean score using prefatory statements than boys not using prefatory statements.

While in only two of four stories did girls using prefatory statements have a higher mean score than girls not using prefatory statements.

To summarize, sex differences were not found to be an important factor to consider in listening comprehension.

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this chapter will be to (a) summarize the study, (b) state the conclusions regarding the hypotheses, and (c) to list suggestions for further research.

Summary

The present study was conducted in Cliffside Park, New Jersey and involved 310 students in the fourth and fifth grades.

Six null hypotheses were tested. The first two examined the difference between students using prefatory statements and students not using prefatory statements for the two grade levels. The second two hypotheses tested the effect of reading levels of above average, average, and below average with and without prefatory statements for both grade levels. The last two hypotheses examined sex differences and the use and nonuse of prefatory statements for both grade levels.

Listening comprehension was measured using four listening exercises developed by the experimenter and tested in a Pilot Study. There were two listening exercises for each grade level. The two exercises enabled the

subjects to receive both treatments, prefatory statement with one story and the other story without the prefatory statement.

The Reading Comprehension Test of the Iowa Tests of Basic Skills served as the reading measure.

All children were screened for auditory problems and were dropped from the study if they had a 20-decibel loss in either ear.

Seven intact classes on fourth and seven intact classes on fifth-grade level were randomly assigned to a group that would hear the prefatory statement with the first or second story.

The subjects were then rank ordered, and one-half of the initial testing population was randomly selected for the final analysis of data. The subjects were then divided into above-average, average, and below-average reading levels on the basis of the reading comprehension score.

The data was analyzed using a One- and Two-Way Analysis of Variance. The .05 level was established as the acceptable level of significance for the investigation.

The results of the first two hypotheses showed no significant difference in listening comprehension between students using prefatory statements and students not using prefatory statements in three of four stories. In the fourth story, a significant difference was found between

the two treatments.

The results of the third and fourth hypotheses showed no difference in listening comprehension between above-average, average, and below-average readers using prefatory statements and above-average, average, and below-average readers not using prefatory statements in 11 of 12 reading levels.

The results of the last two hypotheses showed no difference in listening comprehension between boys and girls using prefatory statements and boys and girls not using prefatory statements for both grade levels.

Conclusions

Prefatory Statement vs. Without Prefatory Statement

Generally, there was a tendency for students who used prefatory statements to obtain a higher mean score than students not using prefatory statements. The prefatory statements employed in the present study, however, did not provide enough organizational material to significantly improve listening comprehension.

It was concluded, therefore, that the prefatory statements were of limited value in improving the listening comprehension of fourth- and fifth-grade students.

Reading Levels of Above-Average, Average, and Below-Average

Once again, there was a tendency in all reading levels using prefatory statements to obtain a higher mean score than reading levels not using prefatory statements. The prefatory statements were not shown, however, to significantly improve listening comprehension for any particular reading level.

It was concluded that prefatory statements did not significantly improve the listening comprehension of any particular reading level.

Sex Differences

It was concluded that there was no difference between boys and girls using prefatory statements and boys and girls not using prefatory statements.

It was concluded that sex was not an important factor to consider in improving listening comprehension.

Suggestions for Further Research

An examination of the review of the literature for the present study showed a need for studies dealing with organizers and listening comprehension.

One area for research would involve rewriting and extending the prefatory statements of this study to determine an improvement in listening comprehension.

Another aspect of needed research would involve using other organizational techniques such as cognitive

mapping, examining the visual outline of the story, or attention-producing techniques such as a picture.

Another area for research might involve varying the difficulty level of the stories by about four grade levels to determine if prefatory statements become more useful to students as difficulty level of the story is increased.

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APPENDIX A

PREFATORY STATEMENTS

PREFATORY STATEMENTS

Grade 4

The Mississippi Steamboat

The kind of steamboat that Robert Fulton built was fine for the deep water of the Hudson River, but it did not work so well on the shallow, swift waters of the Mississippi. It took a different kind of steamboat to master the Mississippi River. The man who built that steamboat was Henry Shreve. This is the story about the troubles Henry Shreve had before his steamboat made its first trip.

The Invention of the Balloon

The story you will hear is about two inventors who lived long ago. The two brothers, Joseph and Jacques Montgolfier, accidentally discover the balloon while working in their store. You will hear a story about the first air trips by balloon.

Grade 5

The Story of Caves

Caves are exciting and dangerous places. There are many beautiful and awesome sights to examine in caves. Two famous caves are Howe Caverns in New York and Carlsbad Caverns in New Mexico. You will hear a story of how caves were discovered and what you may find inside.

The Case of the Leopard-Skin Rug

You are going to hear a story about an unusual rug, a leopard-skin rug. It is the story of a soldier who buys the rug from a peddler for only $25 and later finds out that it is worth a great deal of money.

APPENDIX B

PROCEDURE SHEETS FOR USE OF STORIES WITH AND WITHOUT PREFATORY STATEMENTS

PROCEDURE SHEET FOR USE OF THE STORIES
WITHOUT THE PREFATORY STATEMENTS

1. Instruct children to clear their desks. Make sure that all books and pencils are away.

2. Draw the attention of the class and say, "You are going to hear a story from the tape recorder. Listen carefully to the story so that you can answer the questions that will follow."

3. Play tape of the story.

PROCEDURE SHEET FOR USE OF PREFATORY STATEMENT
WITH THE MISSISSIPPI STEAMBOAT

1. Instruct children to clear their desks. Make sure that all books and pencils are away.

2. Draw attention of class and say, "You are going to hear a story from the tape recorder. Listen carefully to the story so that you can answer the questions that will follow."

3. Say, "The kind of steamboat that Robert Fulton built was fine for the deep water of the Hudson River, but it did not work so well on the shallow swift waters of the Mississippi. It took a different kind of steamboat to master the Mississippi River. The man who built that steamboat was Henry Shreve. This is the story about the troubles Henry Shreve had before his steamboat made its first trip.

4. Play tape of the story.

PROCEDURE SHEET FOR USE OF PREFATORY STATEMENT*

WITH THE INVENTION OF THE BALLOON

1. Instruct children to clear their desks. Make sure that all books and pencils are away.

2. Draw attention of the class and say, "You are going to hear a story from the tape recorder. Listen carefully to the story so that you can answer the questions that will follow."

3. Say, "The story you will hear is about two inventors who lived long ago. The two brothers, Joseph and Jacques Montgolfier, accidentally discover the balloon while working in their store. You will hear a story about the first air trips by balloon."

4. Play tape of the story.

PROCEDURE SHEET FOR USE OF THE PREFATORY STATEMENT WITH THE STORY OF CAVES

1. Instruct children to clear their desks. Make sure that all books and pencils are away.

2. Draw attention of the class and say, "You are going to hear a story from the tape recorder. Listen carefully to the story so that you can answer the questions that will follow."

3. Say, "Caves are exciting and dangerous places. There are many beautiful and awesome sights to examine in caves. Two famous caves are Howe Caverns in New York and Carlsbad Caverns in New Mexico. You will hear a story of how caves were discovered and what you may find inside."

4. Play tape of story.

PROCEDURE SHEET FOR USE OF THE PREFATORY STATEMENT
WITH THE CASE OF THE LEOPARD-SKIN RUG

1. Instruct children to clear their desks. Make sure that all books and pencils are away.

2. Draw the attention of the class and say, "You are going to hear a story from the tape recorder. Listen carefully to the story so that you can answer the questions that will follow."

3. Say, "You are going to hear a story about an unusual rug, a leopard-skin rug. It is the story of a soldier who buys the rug from a peddler for only $25 and later finds out that it is worth a great deal of money."

4. Play tape of the story.

APPENDIX C

TEXT OF THE FOUR LISTENING STORIES

THE INVENTION OF THE BALLOON

There were two brothers named Joseph and Jacques Montgolfier. They were inventors who lived two hundred years ago in France. They owned a paper business, and they were always trying to invent new ways to use paper. The more uses they could find, the more paper they could sell.

One day, Joseph and Jacques sat looking at the piles of paper that were all around them. "We need some new ideas," said Joseph.

"I've been thinking so long I'm tired," answered Jacques. "I'm tired of the sight of paper." He walked over to the window. "Sometimes I wish that all of our paper would float away, like that cloud up there."

"It looks like a big white puff of smoke," Joseph answered. "I wonder if a paper bag would float like a cloud if we filled it with smoke?"

The brothers looked at each other and laughed. Here was a new idea. Would it work? They must test it. They made a paper bag shaped like a ball. It had a small opening in the bottom. They burned paper beneath the opening in order to fill the bag with smoke. Just as they hoped, the bag floated to the ceiling. "It works!" they cried. "We have invented a new toy."

They showed the balloon to their friends. "This is more than a toy," said their friends. "You should make

a large balloon and float it outdoors, where there is no ceiling to stop it, and where everyone can see it."

Twenty years later, on June 5, 1783, the brothers made a public demonstration. This time they sent up a cloth bag lined with paper. The balloon was thirty-five feet in diameter and rose to a height of one thousand feet. It was lifted by smoke from a large bonfire, and it stayed aloft ten minutes and traveled a mile and a half.

Everyone was excited about what they had done. Even the kind of France wanted to see a balloon. So, three months later, the brothers sent up another balloon before the court of Louis XVI. This balloon carried living passengers--a sheep, a rooster, and a duck--in a basket cage attached under the balloon. This was a test to see whether anyone could live through a balloon trip. The balloon itself was made of silk and was painted with pictures of faces, flowers, and animals, so that it looked like the fanciest Easter egg floating in the sky. When this balloon landed after a flight of eight minutes, men on horses galloped to the landing place, eager to see whether the animals had survived the flight. The animals were bewildered, but only the rooster was hurt--and that was because the sheep had kicked him and broken his wing!

Now that it seemed safe to use balloons, plans were made to send a man up in a balloon. The king offered to supply a criminal who had been sentenced to death. But

instead the king's historian--a man named de Rozier--offered himself as the first airman. He was as eager to make history as he was to write it.

One difficulty with the first balloons was that there was no way to keep the air warm. When the heated air in the balloons cooled off, the balloons came down. To overcome this problem, a special balloon was built for the king's historian. The balloon was made of a special linen and was very large. It was forty-five feet in diameter and seventy-five feet high. The basket attached to it was big enough to hold two men, a brass fire pan, a supply of wool and straw, and a bucket of water. The wool and the straw were burned in the fire pan in order to keep the air in the balloon warm. The bucket of water was used in case the fire got out of control. This might happen because sparks from the burning fuel could easily reach the bag and set it on fire.

Some stories say that de Rozier made the first balloon trip by himself on October 15, 1783. This balloon was kept tied to the ground, and it stayed up for only four minutes. A month later de Rozier and another man made the first real air trip in the special balloon. Everyone in the city of Paris watched as the two men sailed over its church spires to land twenty-five minutes later in a field outside the city. De Rozier was the pioneer of air travel, and he was also its first victim. In 1785, he

was trying to cross the Channel from France to England in a hydrogen-filled balloon. The hydrogen in his balloon exploded, and he was killed.

At first the balloon invented by the Montgolfier brothers was important only as public amusement. Later, balloons were used in wars, including the American Civil War. Today, balloons are used to gather information about the weather and the atmosphere.

THE MISSISSIPPI STEAMBOAT

Many people used to gather on the docks of the Ohio River to watch the boatbuilders. One day the crowd was looking at a boat that Henry Shreve was building.

"Hey, don't close up the boat!" a man yelled to the carpenter. "The engine and the boiler aren't in yet!"

The carpenter kept right on nailing boards over the opening in the boat, and the people laughed. Someone said, "Well, now, what kind of boat is Henry Shreve going to have? Everyone knows that a steamboat's engines have to go down in the bottom of the boat. Otherwise, it will tip over."

Another man said, "First Henry builds it to look like an oversized barge. Then he covers the part where the machinery should go. I used to think that Henry Shreve had good sense, but now I don't know."

The rest of the crowd laughed again.

Henry Shreve spoke up. "No steamboat ever has sailed up the Mississippi River to the Ohio River without the help of flood waters. This boat will be able to go up or down the Mississippi any time."

One of the men who had been laughing said, "Well, Henry, you ought to know. We didn't mean anything against your boat, but it does seem strange. Are you sure it will work? It's not like any of the Fulton steamboats."

Henry answered, "Fulton's boats are built for deep

water. They don't have strong enough engines for a broad, swift river. That is why they won't go very far up the Mississippi. My boat will have stronger engines and she'll ride on the water instead of down in it." Henry turned away from the onlookers and continued to check the work on his new boat.

He had been planning this steamboat for a long time. He had watched the Fulton-type steamboats, and he knew why they would work only in the quiet, deep water of the lower Mississippi. He knew what went wrong in the shallow water upstream, and what to do about it.

Day after day the boatbuilders continued working on the strange-looking boat. Henry showed the workmen where the engines were to go, and soon the engines were put into place on the mail deck. When the main deck was finished, the workmen began building another deck on top of it. There were four boilers to make steam. The boilers were put on the upper deck, above the engines.

"You have the engines tipped over, and the boilers, too!" someone cried. "Steamboat engines won't work unless they stand on end."

Another person said, "Who ever heard of a two-story boat? She'll tip over at the first good puff of wind."

But Henry Shreve smiled at what people were saying and went on working. At last the day came when the boat was finished. Henry was proud of his boat. He named it

the Washington, and invited people to come on board and see.

The news spread that the Washington would soon be leaving for New Orleans. Crowds gathered to see her leave. Some people were ready to laugh. Others watched in fear that the two-story boat would tip over.

Steam built up in her boilers. At last the great paddle wheels began to turn, and the Washington backed away from the landing. She floated lightly and gracefully down the river. She moved without shivering and shaking like other boats.

The Washington made two stops to load freight.

"She won't ride right with all that freight," said the people who waited on the landings.

But she did ride. Smoothly, the Washington moved down the Ohio River.

Then it happened. The people on shore heard a sudden loud roar. Immediately some men set out in small boats for the Washington. When they reached the steamboat, they saw dead and injured on the deck. One of the four boilers had burst, and the rush of steam had killed some of the men.

Henry Shreve worked hard to find out why the boiler had burst. After a time he was sure that such a thing would not happen again. Finally the Washington was fixed and ready for another trip.

This time only a few men were willing to take a chance on working on the boat as crew members. Henry had to do most of the work himself. He kept watching and checking the engines and boilers. This time everything worked as he had known it could.

The Washington steamed into New Orleans as planned. People there were quite used to steamboats, but they stared in surprise at this one. The Washington sat on the water like a great white swan. People did not know it then, but they were seeing the kind of boat that was to sail the Mississippi for many years.

Henry Shreve had brought the Washington to the end of her first trip. With this strange-looking boat--the first of the real Mississippi steamboats--Henry had proved that the Mississippi could be mastered. And on his return trip upstream from New Orleans to Louisville, Kentucky, Henry sailed without the help of floodwaters, and he set a new record of just twenty-five days. Henry had invented a boat that could sail up or down the Mississippi at any time of the year.

THE CASE OF THE LEOPARD-SKIN RUG

Sergeant Elverne Giltner was one of thousands of American soldiers in Seoul, Korea, in 1951. Like most Americans overseas, he collected souvenirs. Whenever he had a chance, he enjoyed searching for interesting knick-knacks to send his parents in Pueblo, Colorado.

One day in April, Sergeant Giltner left his headquarters to stroll about the war-torn streets. Not far from a government building he halted to look over the wares of a street peddler.

"I have a nice rug you will like," the peddler said. "This rug was made from leopard skins. It is very valuable."

"How big is it?" Giltner asked.

The peddler replied, "Very big." He showed by stepping off several paces that the rug was perhaps eighteen feet long by eight feet wide. "In your country," the peddler said, "this rug would be worth several hundred dollars."

Taking a better look, Giltner saw that it was, indeed, a large rug of leopard skins. It seemed to him that it was not in the best condition. But he liked the idea of surprising his folks with a real leopard-skin rug. "How much do you want?"

The peddler agreed to sell the rug for 150,000 won. At the time, this was about $25 in U.S. money. Tugging at

Giltner's sleeve the peddler whispered, "This rug is from the old queen's palace. She was the last queen of Korea. It is worth two thousand dollars in the United States."

Giltner was impressed. He paid the 150,000 won, picked up his new souvenir, and lugged it back to the barracks.

A few days later the sergeant stuffed the rug into a box and mailed it home.

In Pueblo, the rug was a sensation. Neighbors dropped by to see it. It was so large that it could not be used in any of the rooms in the Giltner home. For the best viewing, Mrs. Giltner had it hauled out into the backyard and strung it over a clothesline.

The Giltner's sent the rug to a local firm for cleaning and storage. Imagine their surprise when it was valued at $25,000.

A newspaper carried that story that said: "Owners of the rug are contacting museums and big game hunters, with a view to selling it, since they feel it is too valuable for their use, and their home will not accommodate it."

A U. S. Bureau of Customs collector in Denver saw the story in the paper. He thought it odd that an American sergeant should be sending a $25,000 rug to the United States. He sent a copy of the clippings to the customs agency in Chicago, suggesting that the subject might call

for some investigation.

The customs agency was indeed interested in the rug. At the same time, the Korean consul general in New York was interested in the report of the rug shipped from Seoul. He realized that it was one of the national treasures stolen from the palace in Seoul at the outbreak of the Korean War. It had hung in the Chang Duk Palace, the home of Queen Min. Then the palace had been made into a museum. Many treasures had been among the loot taken by the Communist soldiers and civilians during the first invasion of Seoul. The consul general told a news reporter, "The rug is worth about one hundred thousand dollars, if such a priceless national treasure can have a price tag."

A customs agent hurried to Pueblo to impound the rug. It was then placed in storage in Denver pending its return to the Korean government. The Giltners were reimbursed for the cost of caring for the rug.

The Korean government and the United States government took the view that young Giltner was an innocent buyer of the rug.

They said that he had not knowingly broken the law by sending the rug home. Thus, the case of the souvenir-hunting sergeant and the leopard-skin rug ended on a note of international goodwill.

THE STORY OF CAVES

Caves, or caverns, are hollowed-out places, usually found in a kind of soft rock called limestone. Most caverns are formed by running water in this way: a river flows underground; as the river flows, it washes away soft rock; then the underground river flows in a different direction. In the place where the river washed away the rock is left a great hollow, or cave.

Almost all of the well-known caves in the United States were found by accident. Most often animals have led people to caves. The Lehman caves in Nevada were found by a man whose horse stumbled into a hole in the ground. A hunter found Mammouth Cave in Kentucky when he followed a wounded bear into the side of a hill.

Another cave was found accidentally by a farmer who owned a clever cow named Millicent. Millicent always went to a certain spot in the pasture on hot summer days. The farmer wondered why she did this. Finally, he found that his cow was enjoying a cool breeze coming up from an opening in the rocks. The opening led underground to a large cavern. Millicent's cave, which is in New York state, is now called Howe Caverns; it is named after the cow's owner, Lester Howe. Like many caverns in America, this cave had been found years before by an Indian tribe, the Iroquois. They had left some of their belongings behind in this cavern, which they called, "the cave of the great

galleries."

A cowboy from New Mexico made one of the most exciting discoveries of a cavern. As he was riding across the mountains one evening, he thought he saw a stream of smoke pouring out of the mountainside and rising high in the sky. When he got closer, he saw what looked like smoke was actually thousands of bats flying from the dark passageways of a cave. The cavern is part of Carlsbad Caverns; today it is a national park. The Indians knew this park, too. More than a thousand years ago, the Basket Maker Indians took shelter there.

Perhaps some of you will want to be spelunkers. Spelunkers are people who visit a cave for fun. If you visit a cave, breathe deeply! The air is cool and very pure, and it contains more oxygen than surface air does. The temperature in a cave changes only a few degrees the year around. It is usually forty-five degrees in a New England cave and seventy degrees in a Texas or Florida cave. But there is a cave in Iowa that is warm in winter and cooled with ice in summer.

Sometimes the walls of caves glitter with sparkling crystals. Huge rocks shaped like icicles hang from the ceiling or seem to grow out of the floor, like candles. Some of these icicles and candles grow together to form pillars.

On the ceilings, walls, and floors you will see

rocks of many strange shapes and beautiful colors. Some of these rock shapes have been names "Elephant's Head," "Santa Claus," and "Mickey Mouse." If you have a good imagination, you can see rock formations that look like giant carrots, sleeping lions, ham and eggs on a platter, climbing lizards, and angels' wings. Naming these shapes is a good game for spelunkers.

Usually the guide who takes people through a cave will ask everyone to stop and be quiet. Then he turns off the light. All around you there is darkness. Everything is completely black. Then you can hear sounds you hadn't noticed before. It is so still that you can hear the drip of water echoing through the room. Once, when the lights were turned off in a cave, a man tripped in a tunnel and was frightened to hear a strange hammering sound. Finally, he realized that it was so quiet he was hearing his own heartbeat.

New caverns can still be found today. Some signs of caves scientists look for--and you can too--are limestone rock, disappearing streams, currents of air coming from holes in the ground, and sinkholes.

Sinkholes are sunken bowls caused by the collapse of cave roofs and walls.

One of you might even find a cave. There are caves in every state except Delaware, and many of them have not been fully explored yet. Besides, caves will form as long

as water travels underground.

But if you do find a cave, don't explore it by yourself. You might slip and fall or get trapped inside. In a large cavern you might even get lost. It is very important never to enter a cave alone.

A boy named Floyd Collins found a cave, but he lost his life because he didn't follow these rules.

Floyd was a farm boy in Kentucky. In 1917, he found the entrance to a cave in his own front yard. For eight years he spent all his spare time exploring it. He would come home with wonderful stories about the large rooms, the underground rivers, and the twisting passages he had seen. But one day he didn't come home. A day later he was found trapped in a narrow passageway with his feet pinned under a huge boulder. All attempts to save him failed, and two weeks later he died of pneumonia. He was buried in the cave he discovered.

Many years later, in 1954, a group of sixty-four scientists spent a full week exploring Floyd Collins' Crystal Cave. They found that it is the biggest cave in the world--and still there are more than one hundred unexplored passages in it.

Maybe you will be the one to find an even bigger cave!

APPENDIX D

LISTENING COMPREHENSION EXERCISES

FOR THE FOUR STORIES

INVENTION OF THE BALLOON

NAME_____
TEACHER_____
GRADE_____DATE_____
SCORE_____

SAMPLE
The Montgolfier brothers invented
A. a bat
B. a balloon
C. a new game
D. a new airplane

1. Inventors are people who
A. make paper
B. design balloons
C. discover new ways of doing things
D. find new ways to fly

2. The Montgolfier brothers lived in
A. United States
B. France
C. Holland
D. Spain

3. The brothers tried to think of new uses for paper because
A. they were going out of business
B. paper was becoming more expensive
C. they couldn't sell many of their products
D. they could sell more paper

4. The Montgolfier brothers owned
A. a grocery store
B. a paper business
C. a balloon factory
D. a bicycle shop

5. The brothers thought of making a paper balloon when they
A. looked at a cloud
B. saw smoke from a fire
C. saw a large ball
D. saw an airplane

6. The paper balloon rose to the ceiling when they
A. filled it with smoke
B. stuffed it with paper
C. burned the balloon
D. blew their breath into it

7. The brothers thought that they had invented
   A. a useless device
   B. a way to fly
   C. a paper bag
   D. a new toy

8. The first living things to make a balloon flight were
   A. friends of the inventors
   B. the Montgolfier brothers
   C. a rooster, sheep and duck
   D. an animal and a historian

9. The Montgolfier brothers sent living things up in the balloon to see
   A. whether they liked to fly
   B. whether they could live through a balloon trip
   C. whether they could fly
   D. whether they could keep the fire burning

10. The animal that was injured was the
   A. rooster
   B. dog
   C. sheep
   D. duck

11. De Rosier offered to ride in the balloon because
   A. he knew no one else would offer
   B. he wanted to win the favor of the king
   C. he wanted to improve the shape of the balloon
   D. he knew the ride would make him famous

12. De Rosier burned straw and wool
   A. to make a signal fire
   B. to keep warm
   C. to make the air warm inside the balloon
   D. to make the balloon fall

13. The balloon came down when
   A. the air was heated
   B. the air cooled off
   C. the supply of wool was set on fire
   D. sparks came from the burning fuel

14. The bucket of water was used
   A. in case of sparks
   B. to cool the wool and straw
   C. to raise the balloon
   D. to cut down on the smoke

THE MISSISSIPPI STEAMBOAT

NAME _____
TEACHER _____
GRADE _____ DATE _____
SCORE _____

SAMPLE

Henry Shreve named his boat the
A. Lincoln
B. Washington
C. Jefferson
D. Lexington

1. Fulton's steamboat was not good for travel
   A. on shallow swift rivers
   B. on the Hudson River
   C. at low speeds
   D. for short distances

2. The engines on Shreve's boat were put
   A. in the bottom of the boat
   B. on the main deck
   C. in the back on the ship
   D. on the upper deck

3. Before Shreve's time engines had always been put in the bottom of the boat so that
   A. the steamboat wouldn't tip over
   B. the steamboat would sail fast
   C. the steamboat would sail anywhere
   D. the engine would get wet

4. The onlookers made fun of Shreve's boat because
   A. they thought it was being built wrong
   B. it didn't have two engines
   C. it didn't have two stories
   D. they thought that it would blow up

5. Shreve wanted to build a steamboat that would sail up the Mississippi
   A. without using steam power
   B. in winter
   C. without using an engine
   D. without flood waters to help it

6. Shreve's boat was unlike Fulton's because Shreve's
   A. had stronger engines
   B. had a bigger bottom
   C. was built for deep water
   D. had only one deck

7. The onlookers said Shreve's boat would
   A. go too fast
   B. sink
   C. tip over
   D. go too slowly

8. When the Washington stopped to pick up freight, people thought
   A. the boat would not ride right under the weight
   B. the crew should leave the boat
   C. the engines would fail
   D. the boat would surely reach New Orleans

9. Men were injured when
   A. the paddle wheel exploded
   B. a boiler burst
   C. the boat tipped over
   D. the top deck collapsed

10. Henry sailed the ship again when
   A. he bought two new boilers
   B. he was sure it was safe
   C. he added a new deck
   D. he placed the engines under the deck

11. The trip from Louisville, Kentucky to New Orleans took
   A. twenty-five hours
   B. sixteen days
   C. twenty-five days
   D. fifteen hours

12. On the next trip Shreve was careful
   A. to do all the work himself
   B. to keep checking the boilers
   C. not to take anyone with him
   D. to carry less freight

13. Men would not work on the Washington because
   A. Henry wanted to do the work himself
   B. they knew Henry was wrong
   C. many men had been killed
   D. they knew the boat would tip over

14. The kind of boat that Shreve built was used
   A. for trips down the river only
   B. for many years after it had been built
   C. for only a few years after it had been built
   D. for trips only when the Mississippi was flooded

THE CASE OF THE LEOPARD-SKIN RUG

NAME_____
TEACHER_____
GRADE_____ DATE_____
SCORE_____

SAMPLE
The name of the soldier was
A. Sgt. Adams
B. Major Smith
C. Sgt. Giltner
D. Capt. Jones

1. The story took place during the
   A. Spanish-American War
   B. First World War
   C. Second World War
   D. Korean War

2. Sgt. Giltner was stationed
   A. behind enemy lines
   B. in a city
   C. near a large lake
   D. close to a department store

3. Sgt. Giltner liked to send knicknacks to
   A. his wife
   B. his mother
   C. his parents
   D. his relatives

4. Sgt. Giltner was first told that the rug was valuable by
   A. a street peddler
   B. U.S. Army General
   C. a newspaper reporter
   D. a fellow soldier

5. Giltner bought the rug
   A. because it was on sale
   B. to surprise his parents
   C. as a gift for his wife
   D. to use in his apartment

6. After Giltner bought the rug
   A. the peddler carried it to Giltner's headquarters
   B. he asked someone to carry it
   C. he carried it back to headquarters himself
   D. the peddler found a boy to carry the rug

7. Giltner paid for the rug
   A. with Korean money
   B. with a check
   C. later that evening
   D. with both Korean and American money

8. Sgt. Giltner sent the rug home
   A. with a friend
   B. through the mail
   C. on a plane
   D. on a ship

9. For best viewing Mrs. Giltner placed the rug
   A. on the patio
   B. on the wall
   C. over a clothesline
   D. on the porch

10. Mrs. Giltner found that the rug was worth
   A. $550.
   B. $25,000.
   C. $35,000.
   D. $1,000.

11. The U.S. Customs Agency in Chicago learned of the rug from
   A. a magazine article
   B. an agent in Denver
   C. Mrs. Giltner
   D. Giltner's parents

12. The rug turned out to be a Korean national treasure that had been
   A. lost while in storage
   B. stolen at the start of the war
   C. thrown away when the palace was changed into a museum
   D. sold to the Chinese government

13. The rug hung in Chang Duk Palace which was the home of
   A. the Royal Family
   B. the King of Korea
   C. Queen Min
   D. the Korean ambassador

14. The story ended on a note of international good will because
   A. both governments exchanged stolen merchandise
   B. the rug was kept by the U.S. government
   C. the rug was restored to the Koreans
   D. the Korean government gave Giltner another rug

THE STORY OF CAVES

NAME_____
TEACHER_____
GRADE____ ____DATE_____
SCORE_____

SAMPLE
Title for the story would be
A. Running Water
B. Carlsbad Caverns
C. Caves in Kentucky
D. Story of Caves

1. A cave, or cavern, is
   A. a hollow place in rock
   B. a strangely shaped rock
   C. an underground river
   D. a large stone cliff

2. The story tells us that most cavers were made by
   A. underground rivers
   B. animals
   C. Indians
   D. wind and rain

3. In the United States most caverns were found
   A. by scientific methods
   B. by cowboys
   C. by boys and girls
   D. by accident

4. The farmer's cow always went to the same spot in the pasture because she
   A. wanted to show the farmer the cavern
   B. wanted to go into the cavern
   C. liked the cool breeze that came from the cavern
   D. was looking for food

5. Howe Caverns in New York state was named after
   A. the owner of the cow
   B. the cow
   C. the first family to enter the cave
   D. an Indian tribe

6. The Indian tribe who first discovered Howe Caverns was the
   A. Mohawk
   B. Iroquois
   C. Sioux
   D. Hopi

7. The black stream that the cowboy saw coming from the cave was really
   A. dust
   B. smoke
   C. bats
   D. river

8. Long ago Carlsbad Caverns was the place where the Indians
   A. performed weddings
   B. took shelter
   C. kept bats
   D. hunted animals

9. The air in a cave is usually
   A. hot and sunny
   B. cool and pure
   C. foggy
   D. full of smoke

10. Rock formations in caves are usually
    A. of many shapes and colors
    B. all alike
    C. all shaped like icicles
    D. all of one color

11. The inside of a cave is usually
    A. very light
    B. dark and quiet
    C. very noisy
    D. very dry

12. There are caves in every state except
    A. New York
    B. California
    C. Delaware
    D. New Jersey

13. Sinkholes are caused by
    A. collapse of cave roof and walls
    B. running water
    C. the movement of the earth
    D. weather conditions

14. A boy in Kentucky was trapped in a cave when
    A. water entered the cave
    B. his foot was pinned under a rock
    C. the ceiling collapsed
    D. animals entered the cave

APPENDIX E

PROCEDURE SHEETS FOR QUESTIONS FOR THE FOUR STORIES

PROCEDURE SHEET FOR QUESTIONS FOR:

THE MISSISSIPPI STEAMBOAT

THE INVENTION OF THE BALLOON

THE STORY OF CAVES

THE CASE OF THE LEOPARD-SKIN RUG

1. Distribute answer sheets.

2. Say, "On the top of the paper fill in your name on the top line." (Pause) "On the second line fill in my name." (Pause) "On the next line fill in the grade and the date." (Pause)

3. Say, "I'm going to read to you something about the story. I'll read the beginning of a sentence and four ways to end the sentence. One of the endings tells what the story really said. You must choose the correct ending for the sentence and draw a line under it."

4. Say, "Look at the Sample question at the top of the page. Listen carefully as I read."

TEACHER WILL READ THE SAMPLE QUESTION AND ANSWERS "Draw a line under the best answer. What did you underline?" Call on someone to read the answer.

5. "Listen carefully because I will read the question only once."

6. Say, "Look at #1. Ready."

7. Read questions and answers 2, 3, 4, 5, 6. Say, "Turn over so that 7 is on top." Continue to read questions and answers.

8. Collect papers.

GRADUATE PROGRAM OF STUDIES: RUTGERS UNIVERSITY

Course No.	Title	Professor
610-581	Reading Materials for Children	Van Orden
610-582	Reading Materials for Youth	Spradley
299-561	Foundations of Reading Instruction	Kling
290-509	Emotional and Social Maladjustment	Bardon
299-510	Reading and Communication in Education	Shew
290-513	Introduction to Early and Middle Years of Childhood	Arnold
290-540	Introduction to Learning	Montare
299-564	Remedial Reading	Zelnick
299-565	Lab in Remedial Reading	Mooney
290-501	Introduction to Educational Tests and Measures	Geyer
299-566	Seminar in Research and Supervision of Reading	Swalm
299-599	Master's Thesis Research	Swalm

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Professional Certification

New Jersey: Elementary 1-8

Professional Experience

1970-1971 Fifth Grade Teacher
Morris Avenue School
Long Branch, New Jersey

1971- Third Grade Teacher
P. S. #3
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